

## CLAIMS

What is claimed is:

1. A method, comprising:
  - capturing an original machine-readable code (MRC) at a location of a document;
  - generating a new MRC based on the original MRC, the new MRC representing the same data of the original MRC; and
  - replacing the original MRC with the new MRC, wherein the new MRC is located at substantially the same location as the original MRC with respect to the rest of the contents of the document.
2. The method of claim 1 further comprising printing the document on a media with the new MRC.
3. The method of claim 1, further comprising:
  - scanning the document; and
  - locating the original MRC within the scanned document.
4. The method of claim 1, further comprising:
  - recognizing the original MRC of the document; and
  - determining the location of the MRC with respect to contents of the document.
5. The method of claim 1, further comprising determining dimensions of the location where the original MRC occupies, wherein the new MRC is generated having substantially the same dimension of the original MRC's dimension.

6. The method of claim 1, further comprising aligning the new MRC with the direction of the pixels comprising the image prior to the printing.
7. The method of claim 1, further comprising aligning the new MRC with respect to pixel boundaries in the document.
8. The method of claim 1, further comprising assuring that the guard area of the MRC is clear or a solid color.
9. The method of claim 1, further comprising:  
determining whether the original MRC has a sufficient quality; and  
prompting for an input whether the original MRC needs to be replaced if it is determined that the original MRC lacks sufficient quality, wherein the new MRC is generated and printed in response to the input received.
10. The method defined in claim 9 wherein sufficient quality is based on at least one of contrast and orientation and detected read errors and image noise.
11. The method of claim 1, further comprising recognizing a signature of the document, wherein generating and printing the new MRC are performed automatically if the format of the document is recognized.
12. The method of claim 1, wherein the original MRC is a barcode.
13. The method of claim 1, wherein the original MRC is an OCR text.

14. An apparatus, comprising:
  - a machine-readable code (MRC) reader to read a first MRC from a location of a document; and
  - a controller coupled to the MRC reader to generate a second MRC based on the first MRC, the second MRC representing the same data of the first MRC, wherein the controller causes the second MRC to be integrated into an electronic version of the document at substantially the same location as the first MRC with respect to rest of contents of the document.
15. The apparatus of claim 14, further comprising a scanner to scan the document.
16. The apparatus of claim 14, wherein the controller causes the MRC reader to recognize the first MRC and to determine the location of the first MRC.
17. The apparatus of claim 14, wherein the controller determines dimensions of the location where the first MRC occupies and wherein the second MRC is generated to have substantially the same dimensions of the first MRC.
18. The apparatus of claim 14, wherein the controller further aligns the second MRC with an orientation of the pixels representing the document.
19. The apparatus of claim 14, wherein the controller further assures that the guard area of the MRC is clear or a solid color on the media.
20. The apparatus of claim 14, further comprising a user interface coupled to the controller, wherein the controller further determines whether the first MRC read by the MRC

reader has a sufficient quality and prompts, via the user interface, for an input whether the first MRC needs to be replaced if it is determined that the first MRC lacks sufficient quality, and wherein the second MRC is generated and printed in response to an input received via the user interface.

21. The apparatus of claim 20, wherein sufficient quality is based on at least one of contrast and orientation and image noise and detected read errors.
22. The apparatus of claim 14, further comprising a scanner coupled to the controller to receive and to recognize a document signature, wherein the controller automatically generates the second MRC and causes the printer to print the second MRC on the media if the document signature is recognized.
23. The apparatus of claim 22, wherein the controller is capable of operating in a training mode to allow the scanner recognize and memorize the page signature.
24. The apparatus of claim 14, wherein the first MRC is a barcode.
25. The apparatus of claim 14, wherein the first MRC is an OCR text.
26. The apparatus of claim 14, further comprising a communication interface capable of coupling to a network to receive and transmit documents over the network.
27. The apparatus of claim 14, further comprising a server capable of directly connecting to a network and performing certain actions in response to one or more requests received over the network.

28. A machine-readable medium having executable code to cause a machine to perform a method, the method comprising:

capturing an original machine-readable code (MRC) at a location of a document;

generating a new MRC based on the original MRC, the new MRC representing the same data of the original MRC; and

replacing the original MRC with the new MRC, wherein the new MRC is located at substantially the same location as the original MRC with respect to the rest of the contents of the document.

29. A method, comprising:

locating and scanning a first machine readable code (MRC) at a location of a document;

recognizing a page signature of the document;

automatically generating a second MRC based on the first MRC; and

replacing the original MRC with the new MRC, wherein the new MRC is located at substantially the same location as the original MRC with respect to the rest of the contents of the document.

30. A method, comprising:

locating and scanning a first machine readable code (MRC) at a location of a document;

generating a second MRC based on the first MRC; and

placing the second MRC with a guard area at substantially the same location as the first MRC with respect to rest of contents of the document, wherein the guard area causes the

second MRC to be read more easily than the first MRC when the document having the second MRC is printed.